DOCUMENT RESUME

ED 382 672 TM 023 115

AUTHOR	Greaney, Vincent; Kellaghan, Thomas
TITLE	Equity Issues in Public Examinations in Developing Countries. World Bank Technical Paper Number 272. Asia Technical Series.
INSTITUTION	World Bank, Washington, D. C.
REPORT NO	ISBN-0-8213-3121-3; ISSN-0253-7494
PUB DATE	95
NOTE	36p.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Academic Achievement; Access to Education; Admission (School); Culture Fair Tests; *Developing Nations; Educational Policy; Educational Practices; Elementary Secondary Education; *Equal Education; Ethnic Groups; Foreign Countries; Language Proficiency; *National Competency Tests; Public Schools; Scoring; Sex Differences; *Standardized Tests; Student Placement; *Testing Problems; Test Use
IDENTIFIERS	*High Stakes Tests

ABSTRACT

Public examinations in developing countries play a critical role in the selection of students for participation in the educational system. The examinations tend to be highly academic, bearing little reference to the everyday lives of students, limited to paper-and-pencil tests, and geared toward discriminating among high achieving students. Because of the high stakes attached to examination performance, teachers teach to the examination with the result that inadequate opportunities to acquire relevant knowledge and skills are provided for students who will leave school at an early stage. Practices associated with examinations that may create inequities for some students include: (1) scoring practices; (2) the uses of culturally inappropriate questions; (3) the requirement that candidates pay fees; (4) private tutoring; (5) examination in a language with which students are not familiar; and (6) a variety of types of educational malpractice. The use of quota systems to deal with differences in performance associated with location, ethnicity, or language-group membership also creates inequalities for some students. The available evidence does not indicate that examinations create inequities between genders. Ranking schools on the basis of students' examination performance may not provide a fair assessment of the work of schools. (Contains 85 references.) (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 382 672

WORLD BANK TECHNICAL PAPER NUMBER 272
ASIA TECHNICAL SERIES

Equity Issues in Public Examinations in Developing Countries

Vincent Greaney and Thomas Kellaghan

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.
"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY
J. FEATHER
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"
FINANCE AND DEBT
FORESTRY
HOUSING
AND MANUFACTURING
INSTITU
LAND TENURE
LIVING STA

BEST COPY AVAILABLE

RECENT WORLD BANK TECHNICAL PAPERS

No. 191 Frederiksen, *Water Resources Institutions: Some Principles and Practices*

No. 192 McMillan, Painter, and Scudder, *Settlement and Development in the River Blindness Control Zone*

No. 193 Braatz, *Conserving Biological Diversity: A Strategy for Protected Areas in the Asia-Pacific Region*

No. 194 Saint, *Universities in Africa: Strategies for Stabilization and Revitalization*

No. 195 Ochs and Bishay, *Drainage Guidelines*

No. 196 Mabogunje, *Perspective on Urban Land and Land Management Policies in Sub-Saharan Africa*

No. 197 Zymelman, editor, *Assessing Engineering Education in Sub-Saharan Africa*

No. 198 Teerink and Nakashima, *Water Allocation, Rights, and Pricing: Examples from Japan and the United States*

No. 199 Hussi, Murphy, Lindberg, and Brenneman, *The Development of Cooperatives and Other Rural Organizations: The Role of the World Bank*

No. 200 McMillan, Nana, and Savadogo, *Settlement and Development in the River Blindness Control Zone: Case Study of Burkina Faso*

No. 201 Van Tuijl, *Improving Water Use in Agriculture: Experiences in the Middle East and North Africa*

No. 202 Vergara, *The Materials Revolution: What Does It Mean for Developing Asia?*

No. 203 Cleaver, *A Strategy to Develop Agriculture in Sub-Saharan Africa and a Focus for the World Bank*

No. 204 Barghouti, Cromwell, and Pritchard, editors, *Agricultural Technologies for Market-Led Development Opportunities in the 1990s*

No. 205 Xie, Küffner, and Le Moigne, *Using Water Efficiently: Technological Options*

No. 206 The World Bank/FAO/UNIDO/Industry Fertilizer Working Group, *World and Regional Supply and Demand Balances for Nitrogen, Phosphate, and Potash, 1991/92–1997/98*

No. 207 Narayan, *Participatory Evaluation: Tools for Managing Change in Water and Sanitation*

No. 208 Bindlish and Evenson, *Evaluation of the Performance of T&V Extension in Kenya*

No. 209 Keith, Property Tax: A Practical Manual for Anglophone Africa

No. 210 Bradley and McNamara, editors, *Living with Trees: Policies for Forestry Management in Zimbabwe*

No. 211 Wiebers, *Integrated Pest Management and Pesticide Regulation in Developing Asia*

No. 212 Frederiksen, Berkoff, and Barber, *Water Resources Management in Asia, Volume I: Main Report*

No. 213 Srivastava and Jaffee, *Best Practices for Moving Seed Technology: New Approaches to Doing Business*

No. 214 Bonfiglioli, *Agro-pastoralism in Chad as a Strategy for Survival: An Essay on the Relationship between Anthropology and Statistics*

No. 215 Umali, *Irrigation-Induced Salinity: A Growing Problem for Development and the Environment*

No. 216 Carr, *Improving Cash Crops in Africa: Factors Influencing the Productivity of Cotton, Coffee, and Tea Grown by Smallholders*

No. 217 Antholt, *Getting Ready for the Twenty-First Century: Technical Change and Institutional Modernization in Agriculture*

No. 218 Mohan, editor, *Bibliography of Publications: Technical Department, Africa Region, July 1987 to December 1992*

No. 219 Cercone, *Alcohol-Related Problems as an Obstacle to the Development of Human Capital: Issues and Policy Options*

No. 220 Kingsley, Ferguson, Bower, and Dice, *Managing Urban Environmental Quality in Asia*

No. 221 Srivastava, Tamboli, English, Lal, and Stewart, *Conserving Soil Moisture and Fertility in the Warm Seasonally Dry Tropics*

No. 222 Selvaratnam, *Innovations in Higher Education: Singapore at the Competitive Edge*

No. 223 Piotrow, Treiman, Rimon, Yun, and Lozare, *Strategies for Family Planning Promotion*

No. 224 Midgley, *Urban Transport in Asia: An Operational Agenda for the 1990s*

No. 225 Dia, *A Governance Approach to Civil Service Reform in Sub-Saharan Africa*

No. 226 Bindlish, Evenson, and Gbetibouo, *Evaluation of T&V-Based Extension in Burkina Faso*

No. 227 Cook, editor, *Involuntary Resettlement in Africa: Selected Papers from a Conference on Environment and Settlement Issues in Africa*

(List continues on the inside back cover)

WORLD BANK TECHNICAL PAPER NUMBER 272
ASIA TECHNICAL SERIES

Equity Issues in Public Examinations in Developing Countries

Vincent Greaney and Thomas Kellaghan

The World Bank
Washington, D.C.

Copyright © 1995
The International Bank for Reconstruction
and Development/THE WORLD BANK
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

All rights reserved
Manufactured in the United States of America
First printing March 1995

Technical Papers are published to communicate the results of the Bank's work to the development community with the least possible delay. The typescript of this paper therefore has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility whatsoever for any consequence of their use. The boundaries, colors, denominations, and other information shown on any map in this volume do not imply on the part of the World Bank Group any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. Requests for permission to reproduce portions of it should be sent to the Office of the Publisher at the address shown in the copyright notice above. The World Bank encourages dissemination of its work and will normally give permission promptly and, when the reproduction is for noncommercial purposes, without asking a fee. Permission to copy portions for classroom use is granted through the Copyright Clearance Center, Inc., Suite 910, 222 Rosewood Drive, Danvers, Massachusetts 01923, U.S.A.

The complete backlist of publications from the World Bank is shown in the annual *Index of Publications*, which contains an alphabetical title list (with full ordering information) and indexes of subjects, authors, and countries and regions. The latest edition is available free of charge from the Distribution Unit, Office of the Publisher, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A., or from Publications, The World Bank, 66, avenue d'Iéna, 75116 Paris, France.

ISSN: 0253-7494

Vincent Greaney is a senior education specialist in the Asia Technical Department of the World Bank. Thomas Kellaghan is the Director of the Educational Research Centre, St. Patrick's College, Dublin.

Library of Congress Cataloging-in-Publication Data

Greaney, Vincent.
Equity issues in public examinations in developing countries/
Vincent Greaney, Thomas Kellaghan.
p. cm. — (World Bank technical paper, ISSN 0253-7494 ; no. 272)
Includes bibliographical references.
ISBN 0-8213-3121-3
1. Examinations—Developing countries. 2. Academic achievement--Developing countries. 3. Educational equalization—Developing countries. I. Kellaghan, Thomas. II. Title. III. Series.
LB3058.D48G74 1995
371.2'71'091724—dc20 94–40557
CIP

ASIA TECHNICAL PAPERS

No. 137 Constant and Sheldrick, *An Outlook for Fertilizer Demand, Supply, and Trade, 1988/89-1993/94*

No. 156 De Geyndt, *Managing Health Expenditures under National Health Insurance: the Case of Korea*

No. 162 Replogle, *Non-Motorized Vehicles in Asian Cities*

No. 174 Constant and Sheldrick, *World Nitrogen Survey*

No. 182 Land Resources Unit, Asia Technical Department, *Strategy for Forest Sector Development in Asia*

No. 187 De Geyndt, Zhao, and Liu, *From Barefoot Doctor to Village Doctor in Rural China*

No. 193 Braatz, *Conserving Biological Diversity: A Strategy for Protected Areas in the Asia-Pacific Region*

No. 202 Vergara, *The Materials Revolution: What Does It Mean for Developing Asia?*

No. 211 Wiebers, *Integrated Pest Management and Pesticide Regulation in Developing Asia*

No. 212 Frederiksen, Berkoff, and Barber, *Water Resources Management in Asia, Volume I: Main Report*

No. 217 Antholt, *Getting Ready for the Twenty-First Century: Technical Change and Institutional Modernization in Agriculture*

No. 220 Kingsley, Ferguson, Bower, and Dice, *Managing Urban Environmental Quality in Asia*

No, 222 Selvaratnam, *Innovations in Higher Education: Singapore at the Competitive Edge*

No. 224 Midgley, *Urban Transport in Asia: An Operational Agenda for the 1990s*

No. 233 Frederiksen, Berkoff, and Barber, *Principles and Practices for Dealing with Water Resources Issues*

No. 236 Bennett and Goldberg, *Providing Enterprise Development and Financial Services to Women: A Decade of Bank Experience in Asia*

No. 248 Malhotra, Koenig, and Sinsukprasert, *A Survery of Asia's Energy Prices*

No. 261 Lynch, *Provision for Children with Special Educational Needs in the Asia Region*

Contents

FOREWORD vi

PREFACE vii

ABSTRACT viii

1. PUBLIC EXAMINATIONS 1

2. THE EFFECTS OF EMPHASIZING SELECTION IN THE EXAMINATIONS 3

3. USING EXAMINATIONS FOR ACCOUNTABILITY PURPOSES 5

4. ADMINISTRATION OF EXAMINATIONS 6

Scoring 6
Malpractice 7

5. INEQUITIES AFFECTING GROUPS OF STUDENTS 10

Gender 10
Socioeconomic Status 11
Location 12
Type of School 13
Ethnicity 14
Language Group 14

6. DISCUSSION 16

7. REFERENCES 18

Foreword

Public examinations in developing countries play a critical role in the selection of students for participation in the educational system. Examinations tend not only to dictate what is taught but also how it is taught and more importantly what is learned and what is not learned. The examinations tend to be academic, bear little reference to the everyday lives of students, are limited to pencil-and-paper tests, and are geared towards discriminating between more able students. Because of the high stakes attached to examination performance, students who leave school at an early stage are provided with inadequate opportunities to acquire relevant knowledge and skills.

This study presents for the first time an analysis of inequities associated with public examinations in developing countries. A distinction is drawn between inequities in examinations and more general inequities and inequalities in educational systems. Research from close to thirty countries mainly in Africa and Asia is reviewed.

The study identifies practices associated with examinations that may create inequities for some students. These include scoring procedures, the use of culturally inappropriate questions, the requirement that candidates pay fees, private tutoring, examination in a language with which some candidates are not familiar, and a variety of malpractices. It notes that the use of quota systems to deal with differences in performance associated with location, ethnicity, or language group membership also creates inequities for some students. The study concludes that the limited available evidence does not indicate that examinations create inequities between genders and that ranking schools on the basis of students' examination performance may not provide a fair assessment of the work of schools.

The study should be of interest to national examination bodies, ministries of education, curriculum and research centers and national and international educational agencies. By identifying the sources of inequities it hopes to pinpoint the way to improve examination quality and ultimately the quality of instruction and learning in developing countries.

Harold W. Messenger
Director
Asia Technical Department

Preface

Public examinations are an important feature of educational systems in many countries in Europe, Africa, Asia, and the Caribbean. Their importance derives largely from the fact that examination performance forms the basis of important decisions about the educational and vocational futures of students. In performing their discriminatory function, examinations have acquired a legitimacy based on the view that the qualifications they confer provide a fair indication of achievement and that the distribution of benefits on the basis of such qualifications rewards merit (see Kellaghan, 1990; Lewin & Little, 1982). However, even if one accepts that benefits should be distributed on a meritocratic basis, a range of questions still remain about the adequacy and fairness of examinations in doing this.

A number of points should be borne in mind in considering possible inequities associated with examinations in developing countries. First, it is difficult to separate inequities that might be due to examinations from more general inequalities and inequities in educational systems. The distinction between "inequality" and "inequity" is an important one. While the former describes *disproportionate conditions*, the latter implies *unjust differences*. For example, inequalities in participation rates in higher education by different social groups may reflect differences in fitness to benefit from such education, however undesirable such differences may be. If in this situation examinations contribute to the selection of students for higher education, they are only a confirmatory and publicly defensible judgment of inequalities, which may not be inequitable. A second point relating to inequities associated with public examinations is that relevant empirical data for developing countries are limited and, when available, are often not very accessible. Further, the available evidence varies in quality. In addition to drawing on published sources, in this paper we will sometimes use information obtained in the course of our work in Africa and Asia, which has not been published. A third point relates to the generalizability of findings. Since examinations adopt different forms and may serve different functions in different societies and since there have been efforts in many countries in recent years to improve the quality of examinations, conclusions reached in the paper cannot be applied to the operation of examinations in all systems.

Following a description of public examinations, we will consider evidence relating to problems of *inequity* in public examinations in response to four major questions. First, we ask if the emphasis on discrimination in examinations creates inequities for the large number of students who will not benefit from their results. Second, we ask how equitable it is to use examination results to assess school effectiveness and to hold schools accountable. A third question asks if factors associated with the administration of examinations, in particular scoring practices and malpractice, give rise to inequities. And fourth, we ask whether the inequalities of examination success of identifiable groups are associated with inequities. For example, are the chances of success loaded unjustly in favor or against students of a particular social-class background, gender, place of residence, ethnic or language group?

We are indebted to Alan Brimer, Ward Heneveld, George F. Madaus, and Molapi Sebatane, for comments on an earlier draft of this paper, to Al Aime for his initial suggestions, and to Jim Socknat for his support throughout the preparation of the paper.

Abstract

Public examinations in developing countries play a critical role in the selection of students for participation in the educational system. The examinations tend to be highly academic, bear little reference to the everyday lives of students, are limited to pencil-and-paper tests, and are geared towards discriminating between high achieving students. Because of the high stakes attached to examination performance, teachers teach to the examination with the result that inadequate opportunities to acquire relevant knowledge and skills are provided for students who will leave school at an early stage. Practices associated with examinations that may create inequities for some students include scoring practices, the use of culturally inappropriate questions, the requirement that candidates pay fees, private tutoring, examination in a language with which students are not familiar, and a variety of malpractices. The use of quota systems to deal with differences in performance associated with location, ethnicity, or language-group membership also creates inequities for some students. The available evidence does not indicate that examinations create inequities between genders. Ranking schools on the basis of students' examination performance may not provide a fair assessment of the work of schools.

1. Public Examinations

The origin of public examinations is to be found in the school entrance and civil service examinations of China, which go back at least to the period of the Sui emperors (589-618) (with a prehistory going back much further) and which achieved their most complex form towards the end of the Ch'ing dynasty (1644-1911) (Miyazaki, 1976). Inspired by the Chinese systems, examinations in written format began to appear in European schools in the 16th century, though it was not until some two hundred years later that public examinations of the type found in China were instituted in Europe for selection to universities, the civil service, and the professions. Public examinations are now a major feature of the educational systems of most European countries, which, in turn, passed them on to their former colonies in Africa, Asia, and the Caribbean, where they still flourish (Kellaghan, 1992). The United States, with some exceptions (e.g., the Regents' examinations in New York), has so far not adopted a public examination system. However, during the 1980s and 1990s, a number of proposals contained in reform reports, policy statements, and legislation have advocated a national system or systems of examinations for the country (Madaus & Kellaghan, 1991).

Although there is considerable variation in the form and administration of examinations from country to country (Madaus & Kellaghan, 1991; Noah & Eckstein, 1992), they generally share a number of characteristics (Kellaghan, 1993). First, the examinations are controlled to varying degrees at national or regional level (and sometimes also administered) by an agency or agencies outside the school, usually a state department of education, an examinations council closely related to the state department, or regional examining boards. Second, the examinations are geared to syllabi which are usually defined by an agency outside the school, sometimes the same agency as administers the examinations. Third, examinations are usually provided in the traditional areas of the curriculum (such as mathematics, science, languages). Fourth, examinations are often formal terminal procedures, taken on fixed days under controlled conditions by all candidates taking the examination in a country or region at the end of a course of study. There is a little teacher involvement in assessing students for public examination certification in developing countries. Fifth, examinations are largely written, very often using the essay format, but sometimes making use of multiple-choice items, either in conjunction with other formats or on their own. There may also be provision for oral and practical assessments. Finally, as a result of performance on the examination, the student is awarded a grade or mark in each subject examined.

Public examinations normally are intended to serve a number of functions. The most obvious is to assess the competence of students' learning relative to some agreed standards. The results are then frequently used to discriminate among students with regard to their preferred futures: further education, admission to professional preparation, or employment. While certification is important, particularly for students who are leaving the educational system, there is often a danger of losing sight of this function because of the strong emphasis on selection. Examination results are also often used, formally or informally, to provide evidence of school effectiveness, and schools and teachers may be held accountable for their students' achievements as reflected in examination performance. This use becomes more obvious when results for individual schools are published.

It is particularly appropriate to raise the question of equity in the context of public examinations, since a reason frequently given for their introduction was to ensure an equitable distribution of educational and vocational benefits. Chinese examinations were designed to select government officials on the basis of ability and intellectual achievement rather than of birth; there were no class restrictions on examination entry, and students were not asked whether they were merchants, artisans, or peasants (Miyazaki, 1976). In Britain also, a major reason for introducing public examinations was to replace patronage and nepotism in making appointments to the civil service (Montgomery, 1965).

The use of examinations for selection for further education or employment places a heavy burden on them. The burden is particularly great in developing countries where rates of return to education are higher than in industrialized countries and educational systems are markedly pyramidal in structure: the number of students at lower grades reduces markedly as one proceeds through the grades. In many countries, there is a public examination at three points in the system. The first is held at the end of the primary school and is used to identify the students who will proceed to secondary education. Since the number of places in secondary schools may be extremely limited, relatively few students will progress. In the mid-1980s, for example, in Sub-Saharan Africa countries for which data were available, only 31% of students in the last grade of primary school succeeded in obtaining places in the first grade of secondary school. The percentages were as low as 4 in Rwanda and 9 in Burundi (World Bank, 1990, Table A-12). The second public examination is usually held three years after entry to secondary school when the cohort is further reduced, though not as drastically as at the end of primary schooling. The final examination takes place at the end of secondary schooling, at which stage students compete for university entrance and a range of white-collar jobs. Taking all developing countries together, only about 2% of an age cohort manage to get into a tertiary institution (UNDP, 1993).

2. The Effects of Emphasizing Selection in the Examinations

The high stakes which are attached to examinations have two important consequences. The first is that achievement is defined by the examinations, since it is examination performance and not any other kind of achievement that is rewarded. And second, examinations become obtrusive rather than unobtrusive measures of student achievement (Kellaghan, 1993). Given this situation, it is important that we consider the nature of the examinations and how they might impact on learning and teaching since these might have implications of equity for some students, particularly for those who fail to be selected for further education.

Several studies of public examinations in developing countries (as indeed in developed countries) indicate that they have many limitations as instruments for assessing the achievements of students (Erfan, 1990; Hawes, 1979; Kellaghan & Greaney, 1992; Lewin & Lu, 1991; Little, 1982; Oxenham, 1983; Somerset, 1993; UCLES, 1989, 1990). First, the examinations are generally confined to the measurement of cognitive skills and for the most part measure achievement at a low taxonomic level (e.g., the recognition or recall of factual knowledge) rather than higher-order achievement (e.g., the ability to synthesize knowledge or apply principles to new situations). Second, most examinations are limited to pencil-and-paper tests, ignoring a wide range of knowledge and skills that cannot be measured by such tests. Third, when examinations are geared towards selection rather than student certification, examination questions tend to be difficult since they are designed to discriminate between higher achieving students. The more competitive the selection process, the more difficult the examinations tend to be. Finally, examinations may use culturally inappropriate items or, at best, contain very little reference to the everyday life of students outside the school. For example, a 1980 English Literature examination of the West African Examinations Council featured 39 authors, only six of whom were African (Bray, Clarke, & Stephens, 1986), while in Uganda, the 1989 primary school-leaving social studies examination asked "Through which organization do the farmers in Denmark market their produce?"

Examinations with the characteristics just outlined can hardly be regarded as adequate measures of achievement. However, perhaps of even greater importance is how examinations impact on teaching (what is taught and how it is taught) and on learning (what is learned and how it is learned), translating the limitations of examinations into restricted opportunities for students to learn. These limitations are exhibited in a variety of ways (Kellaghan, 1993; Kellaghan & Greaney, 1992; Lewin & Lu, 1991; Madaus & Kellaghan, 1992; Srivastava, 1979; Uganda. Ministry of Education, 1989). First, alignment takes place between what is taught and the objectives of examinations. Simply put, things that are examined will be taught, what is not examined will not be taught or, if it is, will receive little emphasis. Second, teachers tend to emphasize cognitive skills and to neglect practical ones. Third, the curriculum is further restricted by teachers picking topics within subjects that they think are likely to appear in the examinations. Fourth, a test that focuses on isolated skill components and the recall of factual knowledge can be expected to result in similar skill components and knowledge being emphasized in the classroom (Frederiksen & Collins, 1989). Finally, considerable effort and time are invested in the development of the kind of skills which help students

do well in the examinations. There are reports that teachers teach to past examination papers and use the same types of items in their own tests and even in their teaching. The influence of examinations on teaching is not confined to examination classes but has been found in grades much lower than the ones at which examinations are taken.

A curriculum dominated by examinations (particularly ones of low quality) is unlikely to provide adequate educational experiences for students. This expectation is supported by evidence that in schools dominated by examinations a wide range of important activities, often articulated in official curricula, such as writing, oral skills, practical skills, and local languages, are neglected (see Brooke & Oxenham, 1984; Kellaghan & Greaney, 1992). Indeed, in several countries, examinations are seen as leading to the neglect of broad curriculum goals (see Baumgart & O'Donoghue, 1989; Punjab. Commission for Evaluation of Examination System and Eradication of Malpractice, 1992) and to an emphasis on rote memorization and routine drilling in class (see Brooke & Oxenham, 1984).

A further feature of curricula dominated by examinations is that they are too academic and take little account of the kinds of problems which students are likely to meet at home, in the shop, or in the market place. This is particularly important in countries where many children do not even complete primary schooling. Unless students acquire at school at least the basics of the kinds of skills which employers regard as necessary for employment—social skills and transferable cognitive skills (adaptability, problem-solving ability) (see Gunawardena, 1993)—they are not likely to have the opportunity of acquiring them elsewhere.

We should not be surprised to find that examinations which are designed to select a minority of students for further education have low pass rates. While this is not so in all countries, high failure rates are found in several countries. In one Caribbean country, only one in three primary-school students passes the common entrance examination and, of those who proceed to secondary school, almost half fail to pass any subject in one sitting of the examination (World Bank, 1992a). In some African countries, approximately half of candidates fail to obtain an overall pass on public examinations (Kellaghan & Greaney, 1992).

A number of specific negative effects on students have been attributed to examinations in developing countries. Thus, it is stated that students who do poorly at examinations may be stigmatized as failures and become alienated from education (Kelly, 1986). In China those who fail to gain admission to university "join the grand array of workers and peasants with the self-image of being failures" (Yang, 1993c, p.17). There is also some evidence which would support evidence from Western countries that students who are unlikely to succeed in examinations may be retained in grades (Madaus & Greaney, 1985) or be "pushed out" or "drop out" of education at an early stage (Kreitzer, Haney, & Madaus, 1989). For example, Oloo (1990) has suggested that schools in Kenya with high proportions of passing students on the primary certificate examination achieve this by employing strategies to exclude students who are likely to score poorly on the examination. In China, as many as 20% of students are held back in the second grade of upper middle school in an effort to raise the level of school performance on the college matriculation examination (Wen, 1993). While it seems reasonable to assume that many students will leave school if they see no prospect of achieving the objective of schooling (a certificate), it is not possible to isolate the extent to which examinations contribute to retention or high dropout, given the many other cultural and economic factors which contribute to these practices.

3. Using Examinations for Accountability Purposes

Schools in developing countries are often evaluated in terms of students' performance on public examinations. Such evaluation is sometimes made formal (e.g., in Kenya and the Sudan) where results of national public examinations are published annually to provide the public with an opportunity of comparing schools. The publication of school results is believed to be an effective way of introducing incentive and accountability measures into the school system. In parts of China, political authorities use results of university entrance examinations as a basis for penalizing or rewarding schools (Wen, 1993).

There are several reasons, however, which suggest that ranking on the basis of public examination performance is inequitable. First, comparisons between schools generally fail to take into account differences in intake or the social or physical conditions under which schools operate. If statistical adjustments to examination results are made on the basis of students' prior achievement levels, home background, level of teacher qualifications, and availability of school resources, a very different order might emerge. Second, evidence from the United States indicates that rankings can vary depending on the school outcome that is used (Guskey & Kifer, 1990). Thus a school that does not do well on public examinations might do very well on some other criterion. Third, whether or not adjustments are made to school output measures such as examination performance, errors in measurement on which school rankings are based are seldom if ever taken into account when judgments of merit are being made by ministries of education, the media, or the public. One United Kingdom study concluded that fine distinctions among schools on the basis of achievement test data are statistically invalid (Goldstein, Rasbash, Yang, Woodhouse, Pan, Nuttall, & Thomas, 1993). Fourth, schools can manipulate pass rates by practices, such as student retention and pressure on students to leave school before reaching the examination, which may be highly unjust to students. Lastly, the publication of results may lead to schools that are perceived to be doing well to attract students of high levels of ability, motivation, and parental support, while those that are perceived to be doing badly (even though in a real sense they may be "adding" more "value" than the perceived highly-rated schools) may be avoided by such students. Publicizing results can also lead to the transfer of more able teachers, low morale in individual schools, the creation of ghetto schools, and even in some instances school closure due to declining enrollment.

4. Administration of Examinations

In this section we consider two factors associated with the administration of public examinations that may create inequities for some students. The inequities associated with the first, scoring procedures, are less obvious than inequities associated with the second, malpractice. Further, inequities associated with the former are usually unintended while those associated with the latter are designed to create an unfair situation for some students.

Scoring

While some inequities in scoring may be attributable to influence and corruption, others may arise as a result of the vagaries of marking systems themselves. By conventional psychometric standards, scoring procedures in many countries leave much to be desired, especially from the scorer reliability perspective. Reliability (consistency) studies are seldom conducted and, where they have been (in India), unsatisfactory levels of inter-scorer reliability have been reported (Harper & Misra, 1976; Srivastava, 1979).

Apart from the issue of reliability, methods of arriving at a candidate's final score can work to the advantage of some students while penalizing others. In China, as in other countries, marks are aggregated without adjustment across subjects (Lewin & Lu, 1991). This usually results in subjects not contributing equally to the overall ranking used for selection. In such a situation, a student's ranking on a subject with a highly varied set of scores will contribute more to the overall ranking than will a subject with a less differentiated set of scores. Score variation can be pronounced; in one university entrance examination, the standard deviation for the mathematics test results was more than twice that for Chinese language (see Lu, 1993, Table 2).

The compensation process used in a number of countries allows credits or marks that a student has achieved in one curricular area to make up for a relatively poor performance in another area. For example, in two Ethiopian public examinations, it is possible to compensate for poor performance in three key subject areas by a moderate to good performance in three less important subjects. The effect is similar to that of aggregation of marks in which the individual significance of the subject mark is lost, and with it whatever merit might be attached to requiring a minimum level of performance.

By comparison with conventional external public examinations, continuous or school-based assessment by teachers has the potential to offer a more valid assessment of student achievement since it tends to be based on observations over a lengthy time period and over a broad range of aspects of student achievement. However, the incorporation of such assessment into public examination grades is sometimes associated with inequities. In Malawi, if a teacher fails to give a grade, or fails to submit it on time, the candidate gets no grade in the examination. In Ethiopia, when teacher grades are not provided, candidates are awarded the same percentage marks for the school- based component as they achieved in the external examination. Since school-based marks are usually higher, candidates tend to be penalized by this "corrective" process. In several other countries where school-based assessment contributes to the examina-

tion grade (e.g., India, Indonesia, Pakistan, Sri Lanka), school-based marks tend to be inflated due to the nature of the continuous assessment process, local pride, parental pressure, and in some instances threats. Thus, individual students' final rankings will depend on the extent to which individual teachers succumb to non-achievement related influences.

Given the subjective nature of the marking process in public examinations and a presumably low level of reliability, one might expect that challenges to examination results would be allowed so as to deal with possible inequities. In fact, the facility to challenge results varies from country to country and nowhere is it encouraged. In some countries (e.g., Sudan), appeals are not accepted. In others (e.g., Lesotho), appeals are allowed on payment of a fee. Others place severe restrictions on appeals; Swaziland, for example, limits appeals to one subject per school on any occasion and to the work of not more than six candidates in that subject. Part of the reason for restricting appeals is the high cost involved and the tendency to abuse the system.

Malpractice

Equity and validity considerations require that no candidate for a particular public examination is granted an unfair advantage over other candidates. An unfair advantage would be obtained, for example, if a student had prior access to an examination paper or received support from an external source during the course of the examination. Malpractice (also termed misconduct, use of unfair means, irregularity, and cheating) can be expected when high stakes are attached to test performance. It occurs in the United States among students taking the Scholastic Aptitude Tests (Haney, 1993) and probably in every other country throughout the world. In developing countries, extensive malpractice, including bribery, threats, physical abuse, and a variety of ingenious methods to gain an unfair advantage serve to highlight the importance of public examinations in the lives of students and of their families.

Based on his experiences as Secretary of the Uganda National Examinations Board, David Ongom (1990) identified eight major types of malpractice: leakage (confidential information disclosed to candidates by examination officials, questions setters, or supervisors); impersonation (a non-candidate takes the examination for a registered candidate, sometimes with the full knowledge of the supervisor); external assistance, the most common type of malpractice, accounting for 59% of all cases detected in Uganda from 1987 to 1989 (involving supervisors who write the answers on the board, markers who alter initial scores, or computer operators at the examination board); smuggling of unauthorized material (including textbooks and written notes into the examination hall); copying from a nearby candidate; collusion (two or more candidates exchange information during the examination); substitution of scripts (scripts written during the examination are exchanged with ones written either before the actual examination or afterwards) sometimes with the collusion of school administrators or examination board officials; irregularity (supervisors may alter the amount of time allotted for a particular paper or substitute materials for those prescribed in practical examinations).

The issue of malpractice has become so predominant in Pakistan that for examination officials the concept of examination quality appears to relate only to the question of security. A Punjab Commission for Evaluation of Examination System and Eradication of Malpractices (1992) concluded that

> Cheating in the examination now knows no bounds... Those who dare and those

who wield any kind of authority can do ANYTHING (sic) they want during examinations, without any fear of punitive action... Leaked papers, answer books, continuation sheets, and solved examination questions were freely available at a price... Chairmen of BISEs (Boards of Intermediate and Secondary Education) (are) completely helpless to take action against the defaulting examinees and corrupt subordinates and (are unable) to resist threatening dictates of some bureaucrats, public representatives and gangsters (pp.59-60).

A recent report on malpractice in India noted that "while teachers looked on helplessly in the classrooms and police looked on diffidently ... dozens of brothers and sisters, fathers and cousins stood outside a government school ... hurling rockpropelled answer sheets to students" (Moore, 1993, p. A 14). The answer sheets had been obtained through bribery. The author concluded that "schools where cheating is not reported make newspaper headlines" (p.A 14). Newspapers in Bangladesh have also featured articles on corruption and malpractice in the conduct of public examinations (UCLES, 1989).

In the context of widespread malpractice, it is not surprising that a review of 29 separate reports and policy papers in Pakistan concluded that public examinations "had become devoid of validity, reliability and credibility" (Erfan, 1990, p.44). Perhaps most serious of all is the disincentive to learn that results from the realization that examination success can be bought. If this is so, the conclusion of a Commission established in the Pakistan province of Punjab that the examination system had contributed to a lowering of educational standards should not surprise us (Punjab. Commission for Evaluation of Examination System and Eradication of Malpractices, 1992).

Given the amount of malpractice associated with public examinations, it is to be expected that, despite the obvious educational advantages of school-based assessment, examination bodies in many developing countries have little confidence in marks derived from such assessments. For example, school-based assessment was doomed in Sri Lanka when evidence was produced of work being done by paid outsiders and of unfair advantages for well-equipped schools and wealthy students (Kariyawasam, 1993; UCLES, 1990). In China, the present experiment which permits a small percentage of "meritorious" students to gain admission to college or university on the basis of school recommendation needs to be examined for possible bias and malpractice (Hao, 1993).

Efforts to combat or detect malpractice include overseas printing of examination booklets and answer sheets in Bangladesh (UCLES, 1989) and in Kenya (McGuinness, O'Donoghue, Yussufu, & Kithuka, 1990), administration of oaths of secrecy in Zambia (Kellaghan, Martin, & Sheehan, 1989), requiring examination setters to reside in a hotel for two months without outside contact in China (Lewin & Lu, 1991), comparisons of scripts where copying is suspected, and acting on reports of cheating by other candidates in Uganda (Ongom, 1990).

In the long term, efforts to lessen the extent of malpractice will depend on the level of political and legal support that is forthcoming. Since in some cases, politicians influence the appointment of senior examination board employees (e.g., in Pakistan), and have been able to exact favors for their patronage, the task of bringing about the necessary reforms through the political process is likely to be difficult. Legal sanctions for malpractice in relation to public examinations already exist in many countries; police and judicial authorities, however, tend to show a marked reluctance to enforce them. In a notable exception to this trend, in 1993 one exami-

nation board in Lahore, Pakistan enlisted political and police support to lessen the extent of malpractice. The initiative was accompanied by announcements in the media and, in particular, by careful recruitment of examination supervisors. The sharp drop in pass rates on two public examinations suggests that the campaign had a significant impact. Between 1992 and 1993 the pass rates on the secondary school examination fell from 73.3% to 29.2%, and on the intermediate examination from 34.6% to 17.5% (Ahmed, 1994).

5. Inequities Affecting Groups of Students

It is common in Western countries to consider inequities in the educational progress of students that are associated with such factors as gender, socioeconomic status, location, ethnicity and language group membership. While differences in participation rates and in achievement related to these factors exist in developing countries also, evidence on the extent to which examinations contribute to them is very limited and the role of examinations is often confounded with the role of other variables. Gipps and Murphy (1994) provide evidence from a number of studies in industrialized countries of differences in performance on public examinations between boys and girls and between students from differing ethnic and social groups. While the extent to which assessment procedures might have contributed to differential sub-group performance is not clear from the studies, Gipps and Murphy (1994) suggest that learnt behaviors and expectations of sub-groups might affect their reactions to methods of measurement, which in turn may lead to mis-representation of their achievement.

Gender

In some countries, boys perform better than girls on public examinations. For example, in the Sudan, in each year from 1980/81 to 1989/90, boys recorded higher pass rates than girls in the primary school leaving and intermediate examinations, even though there were more male than female candidates (Greaney, 1991). In Zimbabwe, boys also perform significantly better than girls, especially in mathematics and science. In many cases, the pass rate of boys is twice or three times that of girls (World Bank, 1992b). Similar situations are found in Tanzania (Drenth, van der Flier, & Omari, 1983; TAGRED, 1989), in Kenya (Olekambaine, 1991), and in Malawi (Gordon, 1988). A more recent Kenyan study (Appleton, 1993) showed that although boys outperformed girls on the Kenyan Primary School Certificate Examination, pupil gender alone accounted for less than 1% of the variation in examination score performance. Examples of girls outperforming boys on examinations are found in Mauritius (World Bank, 1985) and in Caribbean countries (World Bank, 1992a). In some countries (e.g., Ethiopia), little or no gender differences are found (Abraha, Beyene, Dubale, Fuller, Holloway, & King, 1991).

Several reasons have been advanced for girls' lower participation and achievements where they occur. These relate to cultural and religious beliefs regarding gender roles, demands on girls to work outside school, conflicting role expectations for girls, particularly at adolescence, and the social organization and quality of schooling (involving, for example, the use of physical punishment, the provision of certain subjects on a gender-biased basis, and a predominance of male teachers) (Abraha et al., 1991; Herz et al, 1991; Manase & Kisanga, 1978; Olekambaine, 1991).

We would need other data on achievement to conclude that differences in examination performance between males and females could or could not be attributed to the character of examinations. Such data are not readily available. Some recent evidence from Zimbabwe, however, suggests that the superior performance of boys on examinations may be related to the nature of the examinations. No gender differences, however, were found for grade 6 Zimbabwean students on performance on any of the

three domains of the IEA (International Association for the Evaluation of Educational Achievement) reading literacy assessment (Murimba et al., 1994).

In the belief that examinations contribute to differences in gender performances, action is being taken in some countries to deal with the issue. For example, in Zambia the consistency of gender differences at all levels, in every subject, and in every province has led to the introduction of gender appraisal criteria in the development of textbooks and in the setting of examination questions.

Socioeconomic Status

The preoccupation in Western countries with the extent to which educational systems reflect and reproduce social-class structure is not found in developing countries. There has, however, been a limited amount of research in the area and this has produced contradictory findings. Some studies have replicated the findings in Western countries (e.g., Lockheed, Fuller, & Nyirongu, 1989; Robinson, 1993) on the relationship between socioeconomic background and achievement, while others have not (Heyneman & Loxley, 1983). It may be that the results reflect differences in the cultural conditions of countries. The failure to find a relationship may also be due to limited variation in the variable representing parental education and occupation, the use of inappropriate measures of home background, or absence of the class differentiation that characterizes Western societies. When indicators of the material, social, and psychological aspects of home backgrounds are used (e.g., parental values and press for the child to achieve), one is more likely to find a relationship between home background and school achievement (Lockheed, Fuller, & Nyirongo, 1989).

Evidence on the relationship between home background and public examination performance is even more limited than evidence involving other measures of achievement. In this context, the relationship between meritocracy and the civil service examination of imperial China has received attention. Based on preliminary research of the imperial dynasties, Wittfogel (1938) concluded that the ruling officialdom largely reproduced itself through the civil service examinations system. However, analysis by Ho (1964) of statistical data on the educational and economic backgrounds of 40,000 Ming-Qing examination graduates, indicated that the examinations acted as a channel of mobility and as a politically and socially stabilizing factor (see also Kracke, 1968; Lee, 1985). What can be generalized from these enquiries is that civil service examinations provided mobility for a large number of people from non-official and poor commoners' family backgrounds. However while there was also some evidence of downward mobility, many families of wealth and power managed to maintain their positions in the social hierarchy through generations.

In a recent study in Mauritius, significant differences in performance on the primary school-leaving examination were found to be associated with the socioeconomic status of pupils' parents and the availability of extra educational facilities, such as reading materials and frequency of tuition outside school (Manrakhan, Vasishtha, & Vadamootoo, 1991). In Tanzania also, correlations between home background (occupational level of family, material facilities in home) and performance on the school leaving examination at the end of primary schooling and on a public examination at the end of the junior cycle of secondary school were found to be modest (Drenth et al., 1983).

Even though socioeconomic background may not be strongly related to examination performance, politicians are aware that including criteria other than, or in addition to, examination

performance will alter the social-class composition of the selected group. Thus, in Mozambique, in selecting students for lower and middle secondary school, social-class origin is taken into account as well as examination results to increase the representation of children of peasants and manual workers (Robinson, 1993). Evidence from China also indicates that changing selection criteria can affect the selection of students from different backgrounds. In China, Mao Zedong abolished entrance examinations and introduced three criteria for selection to university based on intellectual, moral, and physical achievements. During the Cultural Revolution, the intellectual domain tended to be deemphasized and admission to university was based on a minimum of two years work experience "supported by the sponsorship of peer-group judgement of proletarian consciousness" (Little, 1992, p.4). The effect of this was to increase the probability of students from lower social-class backgrounds gaining admission to university (Beemer, 1993). Following the reintroduction of entrance examinations in 1976 and an increase in emphasis on intellectual achievements, this probability decreased.

There are two other factors associated with public examinations which seem relevant in considering possible inequities associated with socioeconomic background. The first relates to fees which students have to pay to sit for an examination and the second relates to the provision of tuition outside school for students.

Policies regarding examination fees vary from country to country. Frequently nominal fees are charged at the primary level; at the secondary level they can be sizeable and sometimes beyond the means of families. In Lesotho, for example, the fee for the secondary school-leaving examination was considerably greater than the average monthly wage in the country (Kellaghan & Greaney, 1992). We do not have any evidence, however, on the extent to which examination fees deter some students from sitting for examinations but it is not unreasonable to suspect that it is a consideration for poorer families.

Given the high stakes attached to public examination performance, it is not surprising to find that in many countries, parents who can afford it seek additional private tuition for their children. In Sri Lanka, up to 71% of students attend tutoring classes outside school, occupying, on average, 9.1 hours of students' time each week (Gunawardena, 1993). In Mauritius, where tutoring is also common, those who avail of it come from better-off families (Baumgart & O'Donoghue, 1989). It is unlikely that tutoring would be so popular if it were not attended by success. Thus, the less well-prepared children of parents who cannot afford it are clearly placed at a disadvantage in the examination contest.

Location

Particular parts of a country (often remote rural areas) are frequently associated with a number of disadvantages—low level of income, shortage of places in school (particularly at secondary level), and provision of education in a language that is not widely used in the area. Often the children of rural families receive no education at all. It has been estimated that less than half of all rural children in most developing countries and as few as 10% in many countries complete four or more grades in school (Anderson, 1988). In Tunisia, enrollment of girls is particularly depressed in rural areas (Thourson Jones, 1980).

Differences in achievement between urban and rural children, in favor of the former, are a feature of educational systems throughout the world but are most pronounced in less developed countries (Elley, 1992). Performance on public examinations reflects these differences.

For example, the pass rate on the primary school-leaving examination in Madagascar has been found to be approximately 60% for candidates living in cities and as low as 20% for rural candidates (Kellaghan & Greaney, 1992). What is relevant from the point of view of inequities associated with examinations is whether or not examinations are likely to underestimate the achievements of rural students. An analysis of examination papers would suggest that the answer to this question must be "yes". For example, a comprehension passage from a university entrance examination in one of the lowest income countries in Asia read "Today we have machines for everything .... for washing clothes and washing dishes .... and mechanical apparatus for cooking and cleaning." Questions based on this passage (e.g., "Can you be sure of the changes machines will bring in the lives of future generations? Give reasons.") would most likely have placed students from rural (and indeed all children from less-privileged backgrounds) at a disadvantage since they would have no direct experience of the world of machines (Somerset, 1993).

Problems of inequity may also arise when examination authorities in a country operate on a regional basis or when different cut-off points for passing are applied in different regions. Where a number of examination authorities exist within a country, a candidate's likelihood of gaining admission to university may depend on where the candidate lives. This situation is exemplified in the Punjab province of Pakistan, which has eight separate boards which operate different grading standards. The resultant inequity is underlined by the fact that students who gain admission to university on the basis of examinations scored by one of the more lenient boards have substantially higher first-year failure rates than those from regions served by boards with more rigorous marking standards (Punjab. Commission for Evaluation of Examination Systems and Eradication of Malpractices, 1992). In China also, where no moderation of examinations exists between the provinces, a candidate's chances of success in the university entrance examination may depend on location (Lewin & Lu, 1991).

Different pass marks for different regions are sometimes introduced to overcome differences in examination performance due to disadvantage associated with location or ethnicity. In China, currently consideration is being given to using geographical quotas to allocate college-university places (Hao, 1993). Ironically, this practice can result in a new form of inequity. In Sri Lanka, where there is a long tradition of the use of quota systems to overcome social inequities, candidates who do not obtain admission to university in one location would have qualified had they resided in another area (UCLES, 1990). A somewhat similar situation operates in Ethiopia, where all regional offices are instructed to use the same percentile rank selected nationally as the passing level. The effect on the examination in 1987 was that while the passing raw score in Eritrea was 42, in Gojam it was as high as 47 (O'Donoghue, Reilly, & Greaney, 1989). Thus, in Ethiopia, as in Sri Lanka, efforts to correct inequities based on place of residence result in inequities for other students.

Type of School

The contribution of the school to pupil achievement, relative to that of the home, seems to be much greater in developing rather than in developed countries (Heyneman & Loxley, 1983). In developing countries, schools frequently lack trained teachers, teachers who have an adequate command of the language of instruction or the pupils' home language, textbooks, desks, adequate lighting, and especially at the secondary level science equipment. In China, where passes in specified elective subjects are required for certain fields of study at the university level, only a small number of middle

schools are able to provide a broad range of elective subjects for students preparing for university entrance examinations (Yang, 1993b).

Ethnicity

The public examination system in a number of countries has been used to favor one ethnic group at the expense of others. In Malaysia, selection of tertiary entrants is carried out centrally by the Ministry of Education using criteria which are not publicly known but favor the Bumiputras (Tzannatos, 1991). In Fiji, the university entrance examination run by the South Pacific Board of Examination and Assessment was replaced partly in an effort to boost the relatively poor pass rate of Fijian as compared to Indian candidates.

Sri Lankan experience highlights the difficulty of operating quota systems along ethnic lines (UCLES, 1990). At one time, the number of university places awarded to Sinhalese and the Tamil minority group was determined by reference to population ratios and, within each group, on the basis of examination performance. This procedure was strongly resisted by the Tamil group who would have obtained substantially more places had a non-quota system been adopted. Since the mid-1970s the system has been changed; currently the top 30% is based on all-island merit list, a further 55% based on a district quota system, while a final 15% has been reserved for specified underprivileged areas (Kariyawasam, 1993).

Language Group

The issue of language is much wider than that of examinations. It is not unusual for children in developing countries to be educated through a language which they do not speak at home and in which their proficiency may be very limited. In fact, in Africa, for the majority of students, the language of instruction in secondary schools is not their mother tongue (Kellaghan & Greaney, 1992). While this practice may be described as "one of the most prevalent forms of discrimination in the classroom" (Lockheed, Verspoor & Associates, 1991, p.166), there are good reasons why it exists. Where there are a large number of language groups in a country—a not uncommon situation—the use of a single language for instruction brings some uniformity to the system. Further, the language that is chosen for instruction (especially at the upper primary- and secondary-school levels) is usually one that has international value, an important consideration in dealing with secondary school curricula and in preparing students for higher education.

While these reasons might suggest the use of a language other than that of students' homes for instruction, there are also serious disadvantages associated with the practice. Not surprisingly, there is evidence that children who speak the language of the school at home have a distinct advantage at school (Elley, 1992). In Latin America, school repetition rates tend to be much higher for students who do not speak the "national" language (Schiefelbein, 1992). There is also evidence that children who are educated at primary school in their home language are severely disadvantaged in secondary school when the medium of instruction is different (Cooksey, 1986).

Are students further disadvantaged through having to take examinations in a language other than their home language? If the purpose of an examination is to determine students' level of achievement in a subject other than the language itself (e.g., mathematics, science, history), then the answer would appear to be "yes". A number of commentators have attributed low levels of achievement in public examinations to the language difficulties of students, pointing out that students with a limited knowledge of a language will inevitably be

handicapped in their ability to demonstrate in examinations the knowledge and skills they have acquired (Eisemon, 1990). In Mauritius, for example, where the lingua franca is Creole, some candidates' poor examination performances have been attributed to a failure to understand questions set in English while low pass rates in Madagascar have been attributed to the extensive use of French in the educational system (Kellaghan & Greaney, 1992).

6. Discussion

It is difficult to separate the possible contribution of public examinations in developing countries to the many inequalities which, by Western standards, exist in educational systems. Such inequalities for the most part are a direct result of limited economic resources which exhibit themselves in some countries in a severe shortage of space to accommodate children in school. In this context, examinations assume an extraordinary importance, since for most children they hold the key to educational and occupational advancement.

While the evidence is limited, we found some indications that inequalities and inequities may be associated with public examination systems. First, the pronounced impact of the examination on the teaching-learning process results in a situation in which the educational needs of the majority of students who do not progress to the next highest level tend to be ignored. Second, the use of examination results to rank schools is likely to lead to unfair judgments about the performance of teachers and schools. Third, inequities for students arise from some scoring practices and malpractices in the administration of examinations. We do not have evidence that examinations create inequities between genders or that they strongly favor one socioeconomic group over another. However, if we consider questions asked in examinations, we are forced to the conclusion that some favor higher socioeconomic groups. Further, it is likely that the requirement that students pay fees to take examinations and the importance of private tuition outside school in preparing students for examination works to the disadvantage of students from poorer homes. A stronger relationship between achievement on examinations and socioeconomic status may emerge as participation in schooling becomes less selective.

Differences in performance on examinations associated with location, ethnicity, or language group membership may not be directly attributable to the nature of examinations. Quota systems to redress consequent imbalances, however, inevitably mean that some students who perform relatively well on examinations fail to be selected because of such factors as the area in which they live or their ethnicity.

The fact that high-stakes examinations will impact on teacher behavior and student learning in whatever country the examinations are held means that the nature of the examination and its influence on the classroom merit serious consideration. Although the relationship between test quality and the quality of students' educational experience is probably more complex than is normally assumed (Alderson & Wall, 1993), there is considerable evidence that the shortcomings of examinations (e.g., inadequate curriculum coverage, limitation of questions to recall and recognition of factual information) are readily translated into the curricular experience of students. It is probably fair to say that in developing countries, where the main function of examinations is to select students, their impact on teaching and learning is largely unintended. An appreciation in some countries that examinations, because of their poor quality, may negatively impact on students' school experience has led to attempts to improve examination quality either by broadening the range of topics that are examined (e.g., to oral, aural and practical skills) or by including material that relates to farming, health, and childcare and is

more relevant to the needs of the majority of students who will terminate their education after they take the examination (see Eisemon, 1990; Postlethwaite & Thomas, 1980; Somerset, 1987). These developments might be interpreted as reflecting an appreciation of the need for more "authentic" testing, a topic in which there is considerable interest in the United States at present.

Despite the presence of entrenched examination traditions, a general lack of research and evaluation of the effects of examinations and administrative demands created by ever-increasing candidate numbers, some efforts are being made to reform present public examination systems in the interests of improving pupil learning and introducing equity. Kenya uses examination results to provide detailed feedback including model answers to each school to enable teachers to improve instruction (Somerset, 1987). In China, separate selection and certification tests, introduced in Shanghai and Zhejiang at the end of middle schools, have led to an increased emphasis on the academic needs of the majority of students instead of the minority destined for university entrance (Yang, 1993a). Recent efforts to eliminate the use of "unfair means" and malpractice in Pakistan suggest that political will, supported by the legal and educational authorities, can result in factors such as pupil ability and application (rather than parental influence and intimidation) affecting the outcome of public examinations. Initiatives such as those, coupled with an increase in awareness of the importance of research into examinations, hold out some hope for reducing the present unacceptable level of inequity associated with public examinations.

7. References

Abraha, S., A. Beyene, T. Dubale, B. Fuller, S. Holloway, & E. King. (1991). "What Factors Shape Girls' School Performance? Evidence from Ethiopia." *International Journal of Educational Development, 11*, 107-118.

Ahmed, Ejaz. (1994). Chairman. Board of Intermediate and Secondary Education, Lahore, Pakistan. Personal Communication.

Alderson, J. C., & D. Wall. (1993). "Does Washback Exist?" *Applied Linguistics, 14*, 115-129.

Anderson, M. B. (1988). *Improving Access to Schooling in the Third World: An Overview.* BRIDGES Research Report Series, No.1. Cambridge MA: Harvard University.

Appleton, S. (1993). "Gender Differences in Educational Attainment in Kenya: Exam Performance and Access to State Secondary Schools." Unpublished. McNamara Fellowships Program. Final report. Washington, D.C.: World Bank.

Baumgart, N., & M. O'Donoghue. (1989). *Improving the Quality of Education in Primary and Secondary schools: A Draft Plan to Improve the System of Assessment and Examinations in Mauritian Schools.* Canberra ACT: International Development Program of Australian Universities and Colleges.

Beemer, H. (1993). Personal communication.

Bray, M., P. B. Clarke, & D. Stephens. (1986). *Education and Society in Africa.* London: Edward Arnold.

Brooke, N., & J. Oxenham. (1984). "The Influence of Certification and Selection on Teaching and Learning." In J. Oxenham (Ed.), *Education Versus Qualifications? A Study of Relationships Between Education, Selection for Employment and the Productivity of Labour.* London: Allen & Unwin.

Cooksey, B. (1986). "Policy and Practice in Tanzanian Secondary Education since 1967." *International Journal of Educational Development, 6*, 183-202.

Drenth, P. J. D., H. van der Flier, & I. M. Omari. (1983). "Educational Selection in Tanzania." *Evaluation in Education, 7*, 95-209.

Eisemon, T. O. (1990). "Examination Policies to Strengthen Primary Schooling in African Countries." *International Journal of Educational Development, 10*, 69-88.

Elley, W. B. (1992). *How in the World do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement.

Erfan, N. (1990). *Examinations in Pakistan: An Overview. Report of the National Workshop on Techniques of Paper Setting and Marking.* Lahore: Curriculum Research and Development Center.

Frederiksen, J. R., & A. Collins. (1989). "A Systems Approach to Educational Testing." *Educational Researcher, 18*, 27-32.

Gipps, C., & P. Murphy. (1994). *A Fair Test?, Assessments, Achievement and Equity*. Philadelphia: Open University Press.

Goldstein, H., J. Rabash, M. Yang, G. Woodhouse, H. Pan, D. Nuttall, and S. Thomas. (1993). "A Multilevel Analysis of School Examination Results." *Oxford Review of Education, 19*, 425-433.

Gordon, W. (1988). *Malawi: Higher Education; Problems, Needs and Priorities*. Washington DC: World Bank

Greaney, V. (1991). "Sudan: Public Examinations." Unpublished paper. Washington DC: World Bank.

Gunawardena, C. (1993). "Employer Expectations and Equity in Education in Sri Lanka." *International Journal of Educational Development, 13*, 125-130.

Guskey, T. R., & E. W. Kifer. (1990). "Ranking School Districts on the Basis of State-Wide Test Results: Is it Meaningful or Misleading?" *Educational Measurement Issues and Practice, 9*, 11-16.

Haney, W. M. (1993). "Cheating and Escheating on Standardized Tests." Paper presented at Annual Meeting of the American Educational Research Association, Atlanta GA, April 12-16.

Hao, Xiaojiang. (1993). "Term Examinations, General Graduation Examinations and College Entrance Examinations." *Chinese Education and Society, 26*, 37-46.

Harper, A. E., & V. S. Misra. (1976). *Research on Examinations in India*. New Delhi: National Council of Educational Research and Training.

Hawes, H. (1979). *Curriculum and Reality in African Primary Schools*. Harlow, England: Longman.

Herz, B., K. Subbarao, M. Habib & L. Raney. (1991). *Letting Girls Learn: Promising Approaches in Primary and Secondary Education*. Washington DC: World Bank.

Heyneman, S. P., & W. A. Loxley. (1983). "The Effect of Primary-School Quality on Academic Achievement Across Twenty Nine High- and Low-Income Countries." *American Journal of Sociology, 88*, 1162-1194.

Ho, Ping-ti. (1964). *The Ladder of Success in Imperial China: Aspects of Social Mobility 1368-1911*. New York: Columbia University, 1964.

Kariyawasam, T. (1993). "Learning, Selection and Monitoring: Resolving the Roles of Assessment in Sri Lanka." Paper presented at Conference on Learning, Assessment and Monitoring, International Centre for Research and Assessment, Institute of Education, University of London.

Kellaghan, T. (1990). "Examination Systems in Africa." In P. Broadfoot, R. Murphy & H. Torrance (Eds.), *Changing Educational Assessment. International Perspectives and Trends*. London: Routledge.

_____.(1992). "Examination Systems in Africa: Between Internalization and Indigenization." In M. A. Eckstein & H.

J. Noah (Eds.), *Examinations: Comparative and International Studies*. Oxford: Pergamon.

_____ (1993). "The Impact of External Examinations on Student and Teacher Behavior." Paper presented at Seminar on Policies Affecting Learning Outcomes Through Impacts on Teachers, Harvard University. Cambridge MA, June 28-July 2.

_____, & V. Greaney. (1992). *Using Examinations to Improve Education: A Study in Fourteen African Countries*. Washington DC: World Bank.

_____, M. O. Martin, & J. Sheehan. (1989). *Improving the Quality of Education in Primary and Secondary Schools: Draft Plan to Improve the System of Assessment and Examinations in Zambian Schools*. Dublin: Educational Research Centre.

Kelly, M. J. (1986). *An Overview of Education in Zambia*. Lusaka: University of Zambia.

Kracke, E. A. (1968). "Family vs. Merit in Chinese Civil Service Examinations Under the Empire." In J. Bishop (Ed.), *Studies of Governmental Institutions in Chinese History*. Harvard University Press, 1968.

Kreitzer, A. E., W. Haney, & G. F. Madaus. (1989). "Competency Testing and Dropouts." In L. Weis, E. Farr & H. G. Petrie (Eds.), *Dropouts from School: Issues, Dilemmas, and Solutions, Part II*. New York: State University of New York.

Lee, T. (1985). *Government Education and Examinations in Sung China*. Hong Kong and New York: Chinese University Press.

Lewin, K. M., & A. Little. (1982). *Examination Reform and Educational Change in Sri Lanka 1972-82: Modernisation or Dependent Underdevelopment?* Brighton, England: Institute of Development Studies, University of Sussex.

_____, & H. Lu. (1991). "Access to University Education in the People's Republic of China: A Longitudinal Analysis of the Structure and Content of the University Entrance Examinations 1984-88." *International Journal of Educational Development, 11*, 231-244.

Little, A. (1982). "The Role of Examinations in the Promotion of "the Paper Qualification Syndrome"." In International Labour Office. *Jobs and Skills Programme for Africa. Paper Qualification Syndrome (PQS) and Unemployment of School Leavers. A Comparative Sub-Regional Study*. Addis Ababa: International Labour Office.

_____. (1992). *Assessment and Selection in Education in China*. London: International Centre for Research on Assessment, Institute of Education, University of London.

Lockheed, M. E., B. Fuller, & R. Nyirongo. (1989). "Family Effects on Students' Achievement in Thailand and Malawi." *Sociology of Education, 62*, 239-256.

_____, A. M. Verspoor and Associates. (1991). *Improving Primary Education in Developing Countries*. Oxford: Oxford University Press.

Lu, Zhen. (1993). "The Fundamental Theory and Practice for the Uniform General Admissions Examination for Colleges

and Universities in China." *Chinese Education and Society, 26*, 42-56.

Madaus, G. F. (1993). "A Technological and Historical Consideration of Equity Issues Associated with Proposals to Change Our Nation's Testing Policy." Paper presented at Symposium on Equity and Educational Testing and Assessment, Washington DC.

_____, & V. Greaney. (1985). "The Irish Experience in Competency Testing: Implications for American Education." *American Journal of Education, 93*, 268-294.

_____, & T. Kellaghan. (1991). "Student Examination Systems in the European Community: Lessons for the United States." In G. Kulm & S. M. Malcom (Eds.), *Science Assessment in the Service of Reform*. Washington DC: American Association for the Advancement of Science.

_____. (1992). "Curriculum Evaluation and Assessment." In P. W. Jackson (Ed.), *Handbook of Research on Curriculum*. New York: Macmillan.

Manase, T. J., & E. S. Kisanga. (1978). "An Insight into Disciplinary Problems in Schools in Tanzania." *Papers in Education and Development*. Cited in M. Mbilinyi & P. Mbughuni (Eds.), (1991), *Education in Tanzania with Gender Perspective*. Dar es Salaam: Swedish International Development Authority.

Manrakhan, R., K. K. Vasishtha & V. Vadamootoo. (1991). *Determinants of Performance in Primary Schools with Special Reference to Failures at CPE Level*. Reduit, Mauritius: Mauritius Examinations Syndicate.

McGuinness, P. J., M. O'Donoghue, A. Yussufu, & M. Kithuka. (1990). *Improving the Quality of Education in Primary and Secondary Schools: Plan to Improve the System of Assessment and Examinations in Kenyan Schools*. Dublin: Educational Research Centre.

Miyazaki, I. (1976). *China's Examination Hell. The Civil Service Examinations of Imperial China*. New York: Weatherhill.

Montgomery, R. J. (1965). *Examinations. An Account of their Evolution as Administrative Devices in England*. London: Longmans.

Moore, H. (1993). "Indian Children Cheat to Survive: Fraud is Epidemic because Exams Offer Hope to the Poor." *Washington Post*, April 17, A14, A20.

Murimba, S., et al. (1994). *The Analysis of Educational Research Data for Policy Development: An Example from Zimbabwe*. Paris: International Institute for Educational Planning.

Noah, H. J., & M. A. Eckstein. (1992). "Comparing National Systems of Secondary School Leaving Examinations." In M. A. Eckstein & H. J. Noah (Eds.), *Examinations: Comparative and International Studies*. Oxford: Pergamon.

O'Donoghue, M., R. Reilly, & V. Greaney. (1989). *Improving the Quality of Education in Primary and Secondary Schools: Draft Plan to Improve the System of Assessment and Examinations in Ethiopian Schools*. Dublin: Educational Research Centre.

Olekambaine, P. (1991). "Primary Education." In M. Mbilinyi & P. Mbughuni (Eds.), *Education in Tanzania with Gender Perspective*. Dar es Salaam: Swedish International Development Authority.

Oloo, A. (1990). "KCPE Ranking is Wrong." *Daily Nation* (Nairobi), February 3.

Ongom, D. L. (1990). "Malpractices in Examinations." Paper presented at seminar on Malpractices in Examinations, Zomba, Malawi.

Oxenham, J. (1983). "What Examinations Test and Emphasize: An Analysis of the Lesotho Primary and Junior Secondary Examinations." In *Lesotho, The Education Sector Survey*. Annexes to the Report of the Task Force. Maseru, Lesotho: Government of Lesotho.

Postlethwaite, T. N., & R. M. Thomas. (1980). *Schooling in the ASEAN Region. Primary and Secondary Education in Indonesia, Malaysia, the Philippines, Singapore, and Thailand*. Oxford: Pergamon.

Punjab. "Commission for Evaluation of Examination System and Eradication of Malpractices." (1992). *Report*. Lahore: Author.

Robinson, E. (1993). "The Effects of Family Background on Pupils' Academic Achievement in Mozambique." *International Journal of Educational Development, 13*, 289-294.

Schiefelbein, E. (1992). *Repetition in Latin America's Primary Schools: Magnitudes, Causes, and Possible Solutions*. Washington DC: World Bank.

Somerset, H. C. A. (1987). *Examination Reform in Kenya*. Washington DC: World Bank.

_____. (1993). "Examinations and the Quality of Education." Unpublished paper. Washington, DC: World Bank.

Srivastava, H. S. (1979). *Examination Reforms in India*. Paris: UNESCO.

TAGRED. (1989). "Girls' Educational Opportunities and Performance in Tanzania, Dar es Salaam." Research Report No. 2. Cited in M. Mbilinyi & M. Mbughuni (Eds.)(1991), *Education in Tanzania with Gender Perspective*. Dar es Salaam: Swedish International Development Authority.

Thourson Jones, M. (1980). "Education of Girls in Tunisia: Policy Implications of the Drive for Universal Enrollment." *Comparative Education Review, 24*, S106-S123.

Tzannatos, Z. (1991). "Reverse Racial Discrimination in Higher Education in Malaysia: Has it Reduced Inequality and at What Cost to the Poor?" *International Journal of Educational Development, 11*, 177-192.

UCLES. (University of Cambridge Local Examinations Syndicate). (1989). *A Report on the Examinations Systems of Bangladesh*. Cambridge: Author.

_____. (1990). *Educational Assessment in Sri Lanka: A Report on the Education and Examination Systems in Sri Lanka*. Cambridge: Author.

Uganda. Ministry of Education. (1989). *Report of Education Policy Review Commission*. Kampala: Author.

UNDP (United Nations Development Programme). (1993). *Human Development Report*. New York: Oxford University Press.

Wen, Ban. (1993). "An Analysis of the Decline in the Scores of the College-University Entrance Examination in Beijing Municipality." *Chinese Education and Society, 26*, 47-58.

Wittfogel, K. (1938). *A New Light on Chinese Society*. New York: Institute of Pacific Relations.

World Bank. (1985). *Mauritius: Education Sector Policy Review*. Washington DC: Author.

_____. (1990). "Education in Sub-Saharan Africa. Updated Statistical Tables." AFTED Technical Note No.1. Washington, DC: Author.

_____. (1992a). *Access, Quality, and Efficiency in Caribbean Education*. Washington DC: Author.

_____. (1992b). *Zimbabwe: A Review of Primary and Secondary Education from Successful Expansion to Equity of Learning Achievements*. Washington DC: Author.

Yang, Xuewei. (1993a). "A Major Reform in the Examination System." *Chinese Education and Society, 26*, 77-95.

_____. (1993b). "Proposals Regarding the College-University Entrance Examination taking place after the Upper Middle School General Graduation Examination." *Chinese Education and Society, 26*, 27-36.

_____. (1993c). "The General Upper Middle School Graduate Examination." *Chinese Education and Society, 26*, 15-26.

Distributors of World Bank Publications

ARGENTINA
Carlos Hirsch, SRL
Galeria Guemes
Florida 165, 4th Floor-Ofic. 453/465
1333 Buenos Aires

Oficina del Libro Internacional
Alberti 40
1082 Buenos Aires

AUSTRALIA, PAPUA NEW GUINEA, FIJI, SOLOMON ISLANDS, VANUATU, AND WESTERN SAMOA
D.A. Information Services
648 Whitehorse Road
Mitcham 3132
Victoria

AUSTRIA
Gerold and Co.
Graben 31
A-1011 Wien

BANGLADESH
Micro Industries Development Assistance Society (MIDAS)
House 5, Road 16
Dhanmondi R/Area
Dhaka 1209

BELGIUM
Jean De Lannoy
Av. du Roi 202
1060 Brussels

BRAZIL
Publicacoes Tecnicas Internacionais Ltda.
Rua Peixoto Gomide, 209
01409 Sao Paulo, SP

CANADA
Le Diffuseur
151A Boul. de Mortagne
Boucherville, Québec
J4B 5E6

Renouf Publishing Co.
1294 Algoma Road
Ottawa, Ontario
K1B 3W8

CHINA
China Financial & Economic Publishing House
8, Da Fo Si Dong Jie
Beijing

COLOMBIA
Infoenlace Ltda.
Apartado Aereo 34270
Bogota D.E.

COTE D'IVOIRE
Centre d'Edition et de Diffusion Africaines (CEDA)
04 B.P. 541
Abidjan 04 Plateau

CYPRUS
Center of Applied Research
Cyprus College
6, Diogenes Street, Engomi
P.O. Box 2006
Nicosia

CZECH REPUBLIC
National Information Center
P.O. Box 668
CS-11357 Prague 1

DENMARK
SamfundsLitteratur
Rosenoerns Allé 11
DK-1970 Frederiksberg C

DOMINICAN REPUBLIC
Editora Taller, C. por A.
Restauración e Isabel la Católica 309
Apartado de Correos 2190 Z-1
Santo Domingo

EGYPT, ARAB REPUBLIC OF
Al Ahram
Al Galaa Street
Cairo

The Middle East Observer
41, Sherif Street
Cairo

FINLAND
Akateeminen Kirjakauppa
P.O. Box 128
SF-00101 Helsinki 10

FRANCE
World Bank Publications
66, avenue d'Iéna
75116 Paris

GERMANY
UNO-Verlag
Poppelsdorfer Allee 55
53115 Bonn

GHANA
Greenwich Mag. and Books
Rivera Beach Hotle
PO Box 01198
Osu-Accra

GREECE
Papasotiriou S.A.
35, Stournara Str.
106 82 Athens

HONG KONG, MACAO
Asia 2000 Ltd.
46-48 Wyndham Street
Winning Centre
7th Floor
Central Hong Kong

HUNGARY
Foundation for Market Economy
Dombovari Ut 17-19
H-1117 Budapest

INDIA
Allied Publishers Private Ltd.
751 Mount Road
Madras - 600 002

INDONESIA
Pt. Indira Limited
Jalan Borobudur 20
P.O. Box 1181
Jakarta 10320

IRAN
Kowkab Publishers
P.O. Box 19575-511
Tehran

IRELAND
Government Supplies Agency
4-5 Harcourt Road
Dublin 2

ISRAEL
Yozmot Literature Ltd.
P.O. Box 56055
Tel Aviv 61560

R.O.Y. International
P.O.B. 13056
Tel Aviv 61130

ITALY
Licosa Commissionaria Sansoni SPA
Via Duca Di Calabria, 1/1
Casella Postale 552
50125 Firenze

JAMAICA
Ian Randle Publishers Ltd.
206 Old Hope Road
Kingston 6

JAPAN
Eastern Book Service
Hongo 3-Chome, Bunkyo-ku 113
Tokyo

KENYA
Africa Book Service (E.A.) Ltd.
Quaran House, Mfangano Street
P.O. Box 45245
Nairobi

KOREA, REPUBLIC OF
Pan Korea Book Corporation
P.O. Box 101, Kwangwhamun
Seoul

Korean Stock Book Centre
P.O. Box 34
Yeoeido
Seoul

MALAYSIA
University of Malaya Cooperative Bookshop, Limited
P.O. Box 1127, Jalan Pantai Baru
59700 Kuala Lumpur

MEXICO
INFOTEC
Apartado Postal 22-860
14060 Tlalpan, Mexico D.F.

NETHERLANDS
De Lindeboom/InOr-Publikaties
P.O. Box 202
7480 AE Haaksbergen

NEW ZEALAND
EBSCO NZ Ltd.
Private Mail Bag 99914
New Market
Auckland

NIGERIA
University Press Limited
Three Crowns Building Jericho
Private Mail Bag 5095
Ibadan

NORWAY
Narvesen Information Center
Book Department
P.O. Box 6125 Etterstad
N-0602 Oslo 6

PAKISTAN
Mirza Book Agency
65, Shahrah-e-Quaid-e-Azam
P.O. Box No. 729
Lahore 54000

PERU
Editorial Desarrollo SA
Apartado 3824
Lima 1

PHILIPPINES
International Book Center
Suite 1703, Cityland 10
Condominium Tower 1
Ayala Avenue, H.V. dela Costa Extension
Makati, Metro Manila

POLAND
International Publishing Service
Ul. Piekna 31/37
00-677 Warszawa

PORTUGAL
Livraria Portugal
Rua Do Carmo 70-74
1200 Lisbon

SAUDI ARABIA, QATAR
Jarir Book Store
P.O. Box 3196
Riyadh 11471

SLOVAK REPUBLIC
Slovart G.T.G. Ltd.
Krupinska 4
P.O. Box 152
852 99 Bratislava 5

SINGAPORE, TAIWAN, MYANMAR, BRUNEI
Gower Asia Pacific Pte Ltd.
Golden Wheel Building
41, Kallang Pudding, #04-03
Singapore 1334

SOUTH AFRICA, BOTSWANA
For single titles:
Oxford University Press Southern Africa
P.O. Box 1141
Cape Town 8000

For subscription orders:
International Subscription Service
P.O. Box 41095
Craighall
Johannesburg 2024

SPAIN
Mundi-Prensa Libros, S.A.
Castello 37
28001 Madrid

Librería Internacional AEDOS
Consell de Cent, 391
08009 Barcelona

SRI LANKA AND THE MALDIVES
Lake House Bookshop
P.O. Box 244
100, Sir Chittampalam A. Gardiner Mawatha
Colombo 2

SWEDEN
Fritzes Fackbokaforetaget
Regeringsgatan 12, Box 16356
S-106 47 Stockholm

Wennergren-Williams AB
P. O. Box 1305
S-171 25 Solna

SWITZERLAND
Librairie Payot
Case postale 3212
CH 1002 Lausanne

Van Diermen Editions Techniques - ADECO
P.O. Box 465
CH 1211 Geneva 16

TANZANIA
Oxford University Press
Maktaba Street
P.O. Box 5299
Dar es Salaam

THAILAND
Central Department Store
306 Silom Road
Bangkok

TRINIDAD & TOBAGO
Systematics Studies Unit
#9 Watts Street
Curepe
Trinidad, West Indies

UGANDA
Gustro Ltd.
1st Floor, Room 4, Geogiadis Chambers
P.O. Box 9997
Plot (69) Kampala

UNITED KINGDOM
Microinfo Ltd.
P.O. Box 3
Alton, Hampshire GU34 2PG
England

ZAMBIA
University of Zambia Bookshop
Great East Road Campus
P.O. Box 32379
Lusaka

ZIMBABWE
Longman Zimbabwe (Pvt.) Ltd.
Tourle Road, Ardbennie
P.O. Box ST 125
Southerton
Harare

BEST COPY AVAILABLE

RECENT WORLD BANK TECHNICAL PAPERS *(continued)*

No. 228 Webster and Charap, *The Emergence of Private Sector Manufacturing in St. Petersburg: A Survey of Firms*

No. 229 Webster, *The Emergence of Private Sector Manufacturing in Hungary: A Survey of Firms*

No. 230 Webster and Swanson, *The Emergence of Private Sector Manufacturing in the Former Czech and Slovak Federal Republic: A Survey of Firms*

No. 231 Eisa, Barghouti, Gillham, and Al-Saffy, *Cotton Production Prospects for the Decade to 2005: A Global Overview*

No. 232 Creightney, *Transport and Economic Performance: A Survey of Developing Countries*

No. 233 Frederiksen, Berkoff, and Barber, *Principles and Practices for Dealing with Water Resources Issues*

No. 234 Archondo-Callao and Faiz, *Estimating Vehicle Operating Costs*

No. 235 Claessens, *Risk Management in Developing Countries*

No. 236 Bennett and Goldberg, *Providing Enterprise Development and Financial Services to Women: A Decade of Bank Experience in Asia*

No. 237 Webster, *The Emergence of Private Sector Manufacturing in Poland: A Survey of Firms*

No. 238 Heath, *Land Rights in Côte d'Ivoire: Survey and Prospects for Project Intervention*

No. 239 Kirmani and Rangeley, *International Inland Waters: Concepts for a More Active World Bank Role*

No. 240 Ahmed, *Renewable Energy Technologies: A Review of the Status and Costs of Selected Technologies*

No. 241 Webster, *Newly Privatized Russian Enterprises*

No. 242 Barnes, Openshaw, Smith, and van der Plas, *What Makes People Cook with Improved Biomass Stoves?: A Comparative International Review of Stove Programs*

No. 243 Menke and Fazzari, *Improving Electric Power Utility Efficiency: Issues and Recommendations*

No. 244 Liebenthal, Mathur, and Wade, *Solar Energy: Lessons from the Pacific Island Experience*

No. 245 Klein, *External Debt Management: An Introduction*

No. 246 Plusquellec, Burt, and Wolter, *Modern Water Control in Irrigation: Concepts, Issues, and Applications*

No. 247 Ameur, *Agricultural Extension: A Step beyond the Next Step*

No. 248 Malhotra, Koenig, and Sinsukprasert, *A Survey of Asia's Energy Prices*

No. 249 Le Moigne, Easter, Ochs, and Giltner, *Water Policy and Water Markets: Selected Papers and Proceedings from the World Bank's Annual Irrigation and Drainage Seminar, Annapolis, Maryland, December 8-10, 1992*

No. 250 Rangeley, Thiam, Andersen, and Lyle, *International River Basin Organizations in Sub-Saharan Africa*

No. 251 Sharma, Rietbergen, Heimo, and Patel, *A Strategy for the Forest Sector in Sub-Saharan Africa*

No. 252 The World Bank/FAO/UNIDO/Industry Fertilizer Working Group, *World and Regional Supply and Demand Balances for Nitrogen, Phosphate, and Potash, 1992/93–1998/99*

No. 253 Jensen and Malter, *A Global Review of Protected Agriculture*

No. 254 Frischtak, *Governance Capacity and Economic Reform in Developing Countries*

No. 255 Mohan, editor, *Bibliography of Publications: Technical Department, Africa Region, July 1987 to April 1994*

No. 256 Campbell, *Design and Operation of Smallholder Irrigation in South Asia*

No. 257 Malhotra, Sinsukprasert, and Eglington, *The Performance of Asia's Energy Sector*

No. 258 Willy De Geyndt, *Managing the Quality of Health Care in Developing Countries*

No. 259 Chaudry, Reid, and Malik, editors, *Civil Service Reform in Latin America and the Caribbean: Proceedings of a Conference*

No. 260 Humphrey, *Payment Systems: Principles, Practice, and Improvements*

No. 261 Lynch, *Provision for Children with Special Educational Needs in the Asia Region*

No. 262 Lee and Bobadilla, *Health Statistics for the Americas*

No. 263 LeMoigne, Subramanian, Xie, and Giltner, editors, *A Guide to the Formulation of Water Resources Strategy*

No. 264 Miller and Jones, *Organic and Compost-Based Growing Media for Tree Seedling Nurseries*

The World Bank

Headquarters
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: (202) 477-1234
Facsimile: (202) 477-6391
Telex: MCI 64145 WORLDBANK
MCI 248423 WORLDBANK
Cable Address: INTBAFRAD
WASHINGTONDC

European Office
66, avenue d'Iéna
75116 Paris, France

Telephone: (1) 40.69.30.00
Facsimile: (1) 40.69.30.66
Telex: 640651

Tokyo Office
Kokusai Building
1-1, Marunouchi 3-chome
Chiyoda-ku, Tokyo 100, Japan

Telephone: (3) 3214-5001
Facsimile: (3) 3214-3657
Telex: 26838

Cover design by Walton Rosenquist

ISBN 0-8213-3121-3

Greaney/Kellaghan

Equity Issues in Public Examinations in Developing Countries

The World Bank